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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,888	06/30/2000	Ashwani Garg	19659.01800	1969

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EXAMINER

JACOBS, LASHONDA T

ART UNIT	PAPER NUMBER
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2157

DATE MAILED: 10/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,888

Applicant(s)

GARG ET AL.

Examiner

LaShonda T. Jacobs

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al (hereinafter, "Allen", 6,058,490) in view of Narendran et al (hereinafter, "Narendran", 6,070,191).

As per claim 1, Allen discloses a distributed processing computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes executing on at least one processor (abstract, and col. 4, lines 8-22);
- at least one application executing in a pure distributed mode where said application is distributed in an active condition among more than one of said processes on said processors (abstract, col. 4, lines 8-22, and col. 6, lines 10-42);
- a system controller for controlling system activation and initial load distribution (col. 5, lines 1-27); and
- a router for providing communications between at least one said application and other applications independent of application locations (col. 5, lines 1-27).

However, Allen does not explicitly disclose:

- an ADSM for providing distributed functionality in said application; and

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- an ALDM for distributing incoming events to said application.

Narendran discloses a server system for processing client requests received over a communication network including:

- an ADSM for providing distributed functionality in said application (col. 3, lines 39-67, and col. 4, lines 1-67); and
- an ALDM for distributing incoming events to said application (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claim 28, Allen discloses a fault tolerant computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes executing on at least one processor (abstract, col. 4, lines 8-22);
- at least one application executing in a pure fault tolerant mode where said application is in an active condition on one said process and in a standby condition on another said process on said processors (abstract, col. 4, lines 8-22, and col. 6, lines 10-42);
- a system controller for controlling system activation and failure recovery (col. 5, lines 1-27); and
- a router for providing communications between at least one said application and other applications independent of application locations (col. 5, lines 1-27).

However, Allen does not explicitly disclose:

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- an ADSM for providing fault tolerant functionality in said application and wherein said application is represented by a single resource set.

Narendran discloses a server system for processing client requests received over a communication network including:

- an ADSM for providing fault tolerant functionality in said application and wherein said application is represented by a single resource set. (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution and fault tolerant functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claim 48, Allen discloses a distributed processing, fault tolerant computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes executing on at least one processor (abstract, and col. 4, lines 8-22);
- at least one application executing in ,a distributed fault tolerant mode where said application is in an active condition on more than one of said processes and is in a standby condition on at least one of said processes on said processors (abstract, col. 4, lines 8-22, and col. 6, lines 10-42);
- a system controller for controlling system activation, failure recovery and initial load distribution (col. 5, lines 1-27); and

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- a router for providing communications between at least one said application and other applications independent of application locations (col. 5, lines 1-27).

However, Allen does not explicitly disclose:

- an ADSM for providing distributed fault tolerant functionality in said application; and
- an ALDM for distributing incoming events to said application.

Narendran discloses a server system for processing client requests received over a communication network including:

- an ADSM for providing distributed fault tolerant functionality in said application (col. 3, lines 39-67, and col. 4, lines 1-67); and
- an ALDM for distributing incoming events to said application (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claims 2 and 49, Allen discloses:

- wherein said system controller also provides procedures for controlling any one or more members of the group consisting of fault recovery, load redistribution, system topology, and system maintenance (col. 2, lines 53-67, and col. 3, lines 1-5).

As per claims 3 and 50, Allen further discloses:

- a plurality of resource sets each being a unit of distribution, and said application using more than one said resource set (col. 5, lines 15-45).

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As per claim 4, Allen discloses:

- wherein shared data in said application is modified by a master critical resource set and updated onto shadow resource sets on all copies of said application and private data in said application is modified by active non-critical resource sets (col. 9, lines 56-67, and col. 10, lines 1-8).

As per claims 5, 30, and 52, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- wherein said ADSM provides API for making a resource set active.

Narendran discloses a server system for processing client requests received over a communication network including:

- wherein said ADSM provides API for making a resource set active (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be active and evenly distributed among the applications.

As per claims 6, 31, and 53, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- wherein said ADSM provides API for making a resource set standby and to warm start said standby resource set.

Narendran discloses a server system for processing client requests received over a communication network including:

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- wherein said ADSM provides API for making a resource set standby and to warm start said standby resource set (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be and evenly distributed among the applications.

As per claims 7, 32, and 54, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- wherein said ADSM provides API for making a resource set out of service.

Narendran discloses a server system for processing client requests received over a communication network including:

- wherein said ADSM provides API for making a resource set out of service (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be and evenly distributed among the applications.

As per claims 8, 33, and 55, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- wherein said ADSM provides API to disable peer update towards a resource set.

Narendran discloses a server system for processing client requests received over a communication network including:

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- wherein said ADSM provides API to disable peer update towards a resource set (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be and evenly distributed among the applications.

As per claims 9 and 56, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- wherein said ALDM distributes the processing load by mapping incoming events to said resource sets and sending events to said active resource set.

Narendran discloses a server system for processing client requests received over a communication network including:

- wherein said ALDM distributes the processing load by mapping incoming events to said resource sets and sending events to said active resource set (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be and evenly distributed among the applications.

As per claims 10 and 57, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- wherein said ALDM provides API to set the weight of a resource set.

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Narendran discloses a server system for processing client requests received over a communication network including:

- wherein said ALDM provides API to set the weight of a resource set (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be and evenly distributed among the applications.

As per claims 11 and 58, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose a load manager for providing dynamic load balancing for said applications by using APIs selected from the group consisting of:

- APIs of said ALDM,
- APIs of said ADSM,
- APIs of said router, and
- APIs of said system controller.

Narendran discloses a server system for processing client requests received over a communication network including:

- APIs of said ALDM,
- APIs of said ADSM,
- APIs of said router, and
- APIs of said system controller (col. 3, lines 39-67, and col. 4, lines 1-67).

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Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be and evenly distributed among the applications.

As per claim 29, Allen discloses:

- wherein data in said application is modified by a single active resource set and updated on a standby resource set (col. 2, lines 61-67, col. 3, lines 1-4, col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claim 51, Allen discloses:

- wherein shared data in said application is modified by a master critical resource set and updated onto shadow resource sets on all copies of said application and private data in said application is modified by active non-critical resource sets and updated onto standby resource sets (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 12, 34, and 59, Allen discloses:

- wherein said router provides API to send messages to said active resource set of said application (col. 4, lines 8-22, and col. 5, lines 1-27).

As per claims 13, 35, and 60, Allen discloses:

- wherein said router provides API to set and clear active mapping for said resource sets (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 14, 36, and 61, Allen discloses:

- wherein said router provides API to set and clear standby mapping for said resource sets (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

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As per claims 15 and 62, Allen discloses:

- wherein said router provides API to set and clear master mapping for said master critical resource set and to add and remove shadow mapping from a multicast list for said critical resource set (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 16, 37, and 63, Allen discloses:

- wherein said router provides API to hold and release messages for said resource sets (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 17, 38, and 64, Allen discloses:

- wherein said router provides API to perform adjacent ping for flushing communication channels and to peersync messages held for said resource sets with said router (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 18, 39, and 65, Allen discloses:

- wherein said router provides API to send update messages to a standby resource set (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 19 and 66, Allen discloses:

- wherein said router provides API to send messages to all said shadows in a multicast list of said critical resource set (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42)

As per claims 20 and 67, Allen discloses:

- wherein said system controller is configured with all of the said applications in the system, with mode of operation for each said application, said critical and non-critical resource sets information of each said application and service user/provider relationship between said applications (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

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As per claims 21, 41, and 68, Allen discloses:

- wherein said system controller provides resource set level API to make a resource set active (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42)

As per claims 22, 42, and 69, Allen discloses:

- wherein said system controller provides resource set level API to make a resource set standby (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 23, 43, and 70, Allen discloses:

- wherein said system controller provides resource set level API to make a resource set out of service (col. 2, lines 61-67, col. 3, lines 1-4, col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 24, 44, and 71, Allen discloses:

- wherein said system controller provides resource set level API to perform any one or more of the group consisting of forced switchover, controlled switchover, forced move and controlled move operation (col. 2, lines 53-67, and col. 3, lines 1-5).

As per claims 25, 45, and 72, Allen discloses:

- wherein said system controller provides application level enable node API to introduce a process with at least one application into a system during initialization, for scaling an operational system, and wherein said system controller implements algorithms to redistribute the load between all said processes by movement of resource sets (col. 2, lines 61-67, col. 3, lines 1-4, col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 26, 46, and 73, Allen discloses:

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- wherein said system controller provides application level disable node API to recover from the failure of at least one application in a process and wherein said system controller redistributes the load by movement of resource sets (col. 2, lines 61-67, col. 3, lines 1-4, col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 27, 47, and 74, Allen discloses:

- wherein said system controller provides application level disable node API to shutdown at least one said application in a process and wherein said system controller redistributes the load by movement of resource sets (col. 2, lines 61-67, col. 3, lines 1-4, col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claim 40, Allen discloses:

- wherein said system controller is configured with all of the said applications in the system, with mode of operation for each said application, and service user/provider relationship between said applications (col. 2, lines 61-67, col. 3, lines 1-4, col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claim 75, Allen discloses a distributed processing, computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes executing on at least one processor (abstract, col. 4, lines 8-22);
- at least one application executing in a pure distributed mode where said application is distributed in an active condition among more than one of said processes on said processors (abstract, and col. 4, lines 8-22);
- a system controller for controlling system activation and initial load distribution (col. 5, lines 1-27); and

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- a router for providing communications between at least one said application and other applications independent of application locations (col. 5, lines 1-27).

However, Allen does not explicitly disclose:

- an update module for providing distributed functionality in said application; and a
- load distributor for distributing incoming events to said application.

Narendran discloses a server system for processing client requests received over a communication network including:

- an update module for providing distributed functionality in said application (col. 3, lines 39-67, and col. 4, lines 1-67); and
- load distributor for distributing incoming events to said application (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claim 76, Allen discloses a fault tolerant computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes executing on at least one processor (abstract, an col. 4, lines 8-22);
- at least one application executing in a pure fault tolerant mode where said application is in an active condition on one said process and in a standby condition on another said process on said processors (abstract, col. 4, lines 8-22, and col. 6, lines 10-42);

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- a system controller for controlling system activation and failure recovery (col. 5, lines 1-27); and
- a router for providing communications between at least one said application and other applications independent of application locations (col. 5, lines 1-27).

However, Allen does not explicitly disclose:

- an update module for providing fault tolerant functionality in said application and wherein said application is represented by a single reserved resource set.

Narendran discloses a server system for processing client requests received over a communication network including:

- an update module for providing fault tolerant functionality in said application and wherein said application is represented by a single reserved resource set (col. 3, lines 39-67, and col. 4, lines 1-67); and

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claim 77, Allen discloses a distributed processing, fault tolerant computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes executing at least one processor; at least one application executing in a distributed .tolerant mode where said application is in an active condition on more than one of said processes and is in a standby condition on at least one of said processes on said processors (abstract, col. 4, lines 8-22, and col. 6, lines 10-42);

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- a system controller for controlling system activation, failure recovery and initial load distribution; (col. 5, lines 1-27); and
- a router for providing communications between at least one said application and other applications independent of application locations (col. 5, lines 1-27).

However, Allen does not disclose:

- an update module for providing distributed fault tolerant functionality in said application; and
- a load distributor for distributing incoming events to said application.

Narendran discloses a server system for processing client requests received over a communication network including:

- an update module for providing distributed functionality in said application (col. 3, lines 39-67, and col. 4, lines 1-67); and
- load distributor for distributing incoming events to said application (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claim 78, Allen discloses a fault tolerant, distributed processing, computer apparatus for use in systems, the apparatus comprising:

- a plurality of processes, executing on at least one processor (abstract, and col. 4, lines 8-22);

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- said processes executing an application in the same mode as at least one other application or in a mode different from said one other application, said same and different modes being:
 - a) a pure distributed mode where an application is distributed among said processes in an active condition (col. 4, lines 8-22, and col. 6, lines 10-42)
 - b) a pure fault-tolerant mode where an application executes in at least one process in an active condition and in at least one process in a standby condition (col. 4, lines 8-22, and col. 6, lines 10-42); and
 - c) a distributed fault-tolerant mode where an application is distributed on multiple processes in an active condition and on at least one process in a standby condition (col. 4, lines 8-22, and col. 6, lines 10-42).

As per claim 79, Allen discloses a method in a computer apparatus for fault tolerant and distributed processing of at least one application in a plurality of processes running on at least one processor, the method comprising the steps of:

- executing said application in a distributed fault tolerant mode wherein said application is distributed in an active condition among more than one process and is in standby condition on at least one said process on said processors (abstract, col. 4, lines 8-22, and col. 6, lines 10-42);
- providing a plurality of resource sets as units of distribution of said application (abstract, col. 4, lines 8-22, and col. 6, lines 10-42); and
- a master critical resource set modifying shared data in said application and updating to a shadow resource set of said application on said processes and an active non-critical

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resource set modifying private data in said application and updating to a standby

resource set of said application on another said process (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claim 87, Allen discloses a method in a computer apparatus for distributed processing of at least one application in a plurality of processes running on at least one processor; the method comprising the steps of:

- executing said application in a pure distributed mode wherein said application is distributed in an active condition among more than one process (col. 4, lines 8-22, and col. 6, lines 10-42);
- providing a plurality of resource sets as units of distribution of said application (abstract, col. 4, lines 8-22, and col. 6, lines 10-42); and
- a master critical resource set modifying shared data in said application and updating to a shadow resource set of said application on said processes and an active non-critical resource set modifying private data in said application (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claim 94, Allen discloses a method in a computer apparatus for fault tolerant processing of at least one application in a plurality of processes running on at least one processor; the method comprising the steps of:

- executing said application in a fault tolerant mode wherein said application is in an active condition on one process and is in standby condition on another said process on said processors (col. 4, lines 8-22, and col. 6, lines 10-42);

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- representing said application by a single resource set (abstract, and col. 4, lines 8-22); and
- an active single resource set modifying private data in said application and updating to a standby resource set of said application on another said process (col. 4, lines 8-22, and col. 6, lines 10-42).

As per claims 80 and 95, Allen further discloses the steps of:

- bringing said resource sets into either of active or standby state on said processes (col. 4, lines 8-22, and col. 6, lines 10-42); and
- said active resource set processing input events and sending update information to said standby resource set (col. 4, lines 8-22, and col. 6, lines 10-42).

As per claims 81 and 96, Allen further discloses the step of:

- using a warmstart procedure to bring said resource sets into standby state from out of service state (col. 6, lines 10-42).

As per claims 82 and 90, Allen discloses the invention substantially as claimed.

However, Allen does not explicitly disclose:

- distributing the processing load of said application by mapping incoming events to said resource sets of said application and sending events to active resource sets.

Narendran discloses a server system for processing client requests received over a communication network including:

- distributing the processing load of said application by mapping incoming events to said resource sets of said application and sending events to active resource sets (col. 3, lines 39-67, and col. 4, lines 1-67).

Therefore, ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the documents to be evenly distributed among the applications.

As per claims 83, 91, and 97, Allen further discloses the step of:

- providing communication between said application and other applications independent of application location and carrying out said communication external to the application by routing an event to the process where a mapped resource set is active (col. 4, lines 8-22, and col. 6, lines 10-42).

As per claims 84 and 98, Allen further discloses the step of:

- transparently sending update messages from said active resource set to a corresponding said standby resource set by performing routing external to said application and routing messages to the process where the resource set is standby (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

As per claims 85 and 99, Allen further discloses the steps of:

- bringing said standby resource sets into the active state for recovering from a failure of active resource sets and routing events to new active resource sets (col. 4, lines 8-22, and col. 6, lines 10-42).

As per claims 86 and 93, Allen further discloses the step of:

- dynamic load balancing by either moving the resource sets from one said process to other said process or by mapping new events to relatively idle resource sets (col. 4, lines 8-22, and col. 6, lines 10-42).

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As per claim 88, Allen further discloses the steps of:

- bringing said resource sets into active state on said processes ; and (col. 4, lines 8-22, and col. 6, lines 10-42);
- said active resource set processing input events (col. 4, lines 8-22, and col. 6, lines 10-42).

As per claim 89, Allen further disclose the step of:

- using a warmstart procedure to bring said resource sets into shadow state from out of service state (col. 6, lines 10-42).

As per claim 92, Allen further discloses the step:

- transparently sending update messages from said active resource set to a corresponding said shadow resource sets by performing routing external to said application and routing messages to the processes where a resource set is shadow (col. 4, lines 8-22, col. 5, lines 1-27, and col. 6, lines 10-42).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,598,077 to Primak et al

U.S. Pat. No. 5,812,779 to Ciscon et al

U.S. Pat. No. 6,128,279 to O'Neil et al

U.S. Pat. No. 6,526,434 to Carlson et al

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 703-305-7494.

The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703-308-7562. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

LaShonda T. Jacobs
Examiner
Art Unit 2157

ltj
September 30, 2003


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